

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



527346



(43) International Publication Date  
25 March 2004 (25.03.2004)

PCT

(10) International Publication Number  
WO 2004/024771 A1

(51) International Patent Classification<sup>7</sup>: C07K 16/28,  
C12N 15/13, 5/10, A61K 39/395, 48/00, A61P 37/06

Uwe [DE/DE]; Dieterwiesenstrasse 13, 67487 Maikammer  
(DE).

(21) International Application Number:  
PCT/EP2003/010064

(74) Agent: SCHÜSSLER, Andrea; Huber & Schüssler, Trud-  
eringer Strasse 246, 81825 München (DE).

(22) International Filing Date:  
10 September 2003 (10.09.2003)

(81) Designated States (national): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,  
MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,  
RO, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT,  
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(30) Priority Data:  
02020236.2 10 September 2002 (10.09.2002) EP

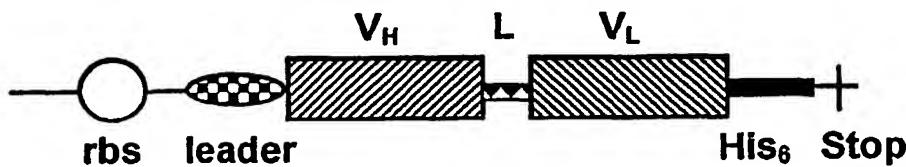
(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): AF-  
FIMED THERAPEUTICS AG [DE/DE]; Im Neuen-  
heimer Feld 582, 69120 Heidelberg (DE).

Published:  
— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: HUMAN CD3-SPECIFIC ANTIBODY WITH IMMUNOSUPPRESSIVE PROPERTIES



scFv<sub>10</sub>      ... L T V S S A K T T P K L G G D I V L ...

scFv<sub>6</sub>      ... L T V S S A K T T P      D I V L ...

WO 2004/024771 A1

(57) Abstract: Described are mono- and multivalent scFv-antibodies comprising the binding sites specific for the human T cell marker CD3. These antibodies are strongly immunosuppressive and do not cause a significant release of cytokines. Furthermore, polynucleotides encoding said antibodies are described as well as vectors comprising said polynucleotides, host cells transformed therewith and their use in the production of said antibodies. Pharmaceutical compositions containing any of the above mentioned polynucleotides, antibodies or vectors are useful for immunotherapy, preferably against acute transplant rejections.